OBJECTIVE: Miacalcin is a recently (2000) introduced anti-osteoporosis drug. Clinical trials have demonstrated that the drug appears to be relatively free of side-effects. This preliminary analysis investigates the relationship between the consumption of Miacalcin and other health care costs.
METHODS: All physician service and medication claims submitted to the government of the province of Québec, Canada, were obtained for individuals with at least one prescription of Miacalcin or another anti-osteoporosis drug (Evista or Fosamax), during the period January 1, 1999 to March 31, 2001. Two-part models (multiple logistic regression followed by linear regression) were used to analyze the data.
RESULTS: Based on utilization records of 60,469 individuals (for all anti-osteoporosis drugs combined), increased use of Miacalcin appears associated with a small reduction in the number of subsequent diagnostic tests and prescriptions for other drugs: 100 days over the first 6 months of 2000, translating into reductions of about 0.3 tests over the next 9 months, or about $24; and a reduction in the number of prescriptions for other drugs in the subsequent 9 months of about 3.1, or about $84. Consumption of Miacalcin does not, however, appear to be associated with a subsequent overall reduction in physician service costs. People who were prescribed Miacalcin in 2000 had higher physician costs in 1999 than people who consumed either of the two other drugs in 2000.
CONCLUSIONS: Evidence that people who were prescribed Miacalcin differ systematically from those who were prescribed other anti-osteoporosis drugs may limit generalizability of the findings. Unit costs used were somewhat imprecise. Nonetheless, the cost of Miacalcin appears to be partially offset by subsequent savings in other health care costs, primarily medication costs.

PA08

FIRST-YEAR COSTS ASSOCIATED WITH NOVEL DISEASE-MODIFYING DRUGS IN THE TREATMENT OF PATIENTS WITH RHEUMATOID ARTHRITIS

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OBJECTIVE: To identify differences in rheumatoid arthritis care costs and utilization among patients who initiate therapy with leflunomide (LEF), etanercept (ETA), or infliximab (INF).
METHODS: A retrospective cohort analysis of patients diagnosed with rheumatoid arthritis (RA) and starting treatment with LEF, ETA, or INF was used. Data for this study were obtained from the PharMetrics Integrated Outcomes Database, comprised of claims paid by health plans to providers of medical and pharmacy services. Patients were selected who were diagnosed with RA (ICD 9 code 714), received LEF, ETA, or INF in 1999 and did not previously receive any of these agents. Eligible patients also were required to have complete data for 12 months before and after they started therapy with a study drug. Payments for RA-related services during the 12-month baseline and follow-up periods were compared between cohorts using Wilcoxon's rank sum test.
RESULTS: A total of 627 LEF- and 466 ETA-treated RA patients were identified. No INF-treated patients met the selection criteria. During the baseline period, mean annual payments for RA-related services were higher in the ETA versus the LEF cohort ($2,567 vs. $1,944; $P < 0.0001$). In the follow-up period, mean annual RA-related costs increased to $12,344 in the ETA cohort versus $4,754 in the LEF cohort ($P < 0.0001$). Most of this difference was in pharmacy costs ($10,423 in ETA vs. $3,217 in LEF), while other direct medical costs were similar between cohorts ($1,921 in ETA vs. $1,537 in LEF).
CONCLUSIONS: Compared with patients in the ETA cohort, health insurance payments for LEF-treated patients were significantly lower during the 12 months following the initiation of therapy. This difference in mean RA-related charges was attributable mainly to the difference in arthritis-related pharmacy charges, and far exceeded pre-existing cost differences among the cohorts.

PA09

AN ECONOMIC COMPARISON BETWEEN COX-2 INHIBITORS AND CONVENTIONAL NSAIDS IN THE TREATMENT PAIN RELATED TO ARTHRITIS

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OBJECTIVE: Selective COX-2 inhibitors (coxibs) provide comparable efficacy with less gastrointestinal (GI) adverse events compared to the conventional non-selective non-steroid anti-inflammatory drugs (NSAIDs) in patients with arthritis. We conducted an economic analysis, focusing specifically on differences in GI-related event rates between the coxibs and conventional NSAIDs.
METHODS: We developed a decision model, using Microsoft Excel® and Decisioneering Crystal Ball®, which focused on three areas of potential economic differentiation between treatment with COX-2 inhibitors and conventional non-selective NSAIDs; GI-related complications, uncomplicated GI ulcers, and GI-related adverse effects. The model was populated with published data describing resource implications and mortality risks, unit costs, underlying NSAID GI-event risks and relative GI-event risks for coxibs. We considered two treatment options (i) celecoxib and (ii) a single NSAID drug based on naproxen, ibuprofen, or diclofenac (as observed in the CLASS study). Sensitivity analyses considered variation in the underlying GI-event risks alongside general uncertainty in resource usage and drug cost data.